

**Iowa Department of Public Health (IDPH)**  
**Occupational Health and Safety Surveillance Program (OHSSP)**  
**Annual Report**  
**July 1, 2012 - June 30, 2013**

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## **FUNDAMENTAL (CORE) SURVEILLANCE**

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## **POTENTIAL OUTCOMES**

- The OHSSP organized the Health & Safety Tent Area at the 2012 Farm Progress Show August 28-30, 2012, providing health and safety demonstrations, displays, and educational materials to farmers and agricultural workers. Display partners were recruited based on OHSSP surveillance analysis of need or risk in the state. Over 100,000 farmers and other participants were in attendance at the three day show. Traffic through the HST was greater than prior events. Some of the results reported by Health & Safety Tent partners recruited to participate include:
  - Grain Bin Rescue Demonstrations (NECAS): #11, 5-30 people per demo
  - Grain Dust Explosion Demonstrations (Nationwide) : #15, 5-20 people per demo
  - HyVee NuVal (picking better food) wheel: 546 participants
  - FS4JK Interviews: farm safety and health resource preferences - 61 interviews
  - Purdue University (AgriAbility, grain safety) 150 - 200 contacts made
  - Hearing Testing: 35 screens in 2 days
  - State Hygienic Lab (well water safety): 175 to 200 contacts
  - Rural Roadway Safety & ISU CTRE driving simulator: 100 people
  - I-CASH, Rural Johnson Co Clinic: materials given out, talked to over 600 farmers
  - AgriSafe Network: Distributed 480 N95 respirators
  - UI ATV Safety: 600 completed surveys; 3000 contacts; 6 focus groups held
  - UI Holden Cancer Center: interacted with 1,261 individuals
    - screened 89 people for skin cancer; 29 recommended for follow-up
    - gave away literature (105), sun bead bracelets (777), lip balm with sunscreen (1,247), and thousands of packets of sunscreen
- Iowa Occupational Health Indicators (OHI) for population demographics and indicators #1-19 through 2010 were submitted to NIOSH and CSTE. This data, as well as additional analysis of subpopulations for some of the indicators, have been shared with a growing number of stakeholders across the state. There is an increased awareness of the Iowa data at the state and local level.

- OHSSP participated in the Iowa Strategic Highway Safety Plan Strategies Workshop at the request of the Iowa Department of Transportation, demonstrating a new appreciation for occupational surveillance in Iowa. Data findings are routinely shared with the State Traffic Records Coordinating Committee.

### **INTERMEDIATE OUTCOMES**

- 2013 Healthy Iowans Progress Report: OHSSP provided data and information for this report, which documents objectives and progress for the state that impact worker safety and health [www.idph.state.ia.us/adper/healthy\\_iowans\\_plan.asp](http://www.idph.state.ia.us/adper/healthy_iowans_plan.asp).
- OHSSP core program staff analyzed 18 years of data for fatalities involving grain activities from the Iowa FACE program and presented the findings as part of the Midwest Region Agricultural Safety & Health Conference in November, 2012. The data have been included in the grain fatality and injury database maintained by Purdue University, which was referenced in numerous media articles.
- OHSSP nominated a program partner for recognition as part of a Rural Health Champion project. Because of this recognition of her work related to grain safety, two insurance companies are now working with her to establish grain safety and rescue training to local volunteer firefighters/rescue units and high school Future Farmers of America (FFA) students who were not eligible for training through Susan Harwood grant funding (<https://www.osha.gov/dte/sharwood/overview.html>).

### **END OUTCOMES**

- The Iowa Fundamental (core) Surveillance project, the Adult Blood Lead Epidemiology & Surveillance (ABLES) project, and expanded programming areas of pesticide poisoning surveillance (Pesticide SENSOR) and work-related fatality surveillance (FACE) have worked to improve the capacity of the OHSSP over the past five years.
  - Pesticide exposure reporting has increased as surveillance has improved.
  - Work-related fatalities have shown a decline, with Iowa FACE identifying 79 work-related fatalities for 2012 (preliminary data), which was below the ten-year average of 82.5 cases (2002-2011) and a decrease of 10 cases from 2011. FACE cases in the first six months of 2013 exhibit a continued decline in work-related fatalities in the state.

### **MAJOR OUTPUTS/PRODUCTS**

#### **Communication Publications**

- AgriSafe Network Newsletter – September 2012
- Iowa Health Focus article Sept/Oct 2012 newsletter – Farm Progress Show [www.idph.state.ia.us/IdphArchive/Archive.aspx?channel=Focus](http://www.idph.state.ia.us/IdphArchive/Archive.aspx?channel=Focus)
- ACCESS Update – Farm Progress Show Health & Safety Tent coverage [www.idph.state.ia.us/IdphArchive/Archive.aspx?channel=AccessUpdate](http://www.idph.state.ia.us/IdphArchive/Archive.aspx?channel=AccessUpdate)

- National Farm Safety and Health Week September 2012
  - Web posting of IDPH OHSSP PDF using FACE data: NECAS website [www.necasag.org/nfsnhw\\_2012.php](http://www.necasag.org/nfsnhw_2012.php)
  - ISU press packet and web posting: [www.abe.iastate.edu/extension-and-outreach/agricultural-health-safety/national-farm-safety-and-health-week-2011/](http://www.abe.iastate.edu/extension-and-outreach/agricultural-health-safety/national-farm-safety-and-health-week-2011/)
    - IDPH OHSSP PDF using 2011 FACE fatality data highlighting agriculture
    - IDPH OHSSP Q & A Fact Sheet 2012 Iowa Harvest Exposure to Mold and Dust in Grain
- Iowa Rural Health Association May 2013 newsletter – Grain Fatalities in Iowa [www.iaruralhealth.org/images/stories/Newsletters/IRHA\\_Newsletter\\_May2013.pdf](http://www.iaruralhealth.org/images/stories/Newsletters/IRHA_Newsletter_May2013.pdf)

### Reports

- Iowa Surveillance of Notifiable and Other Diseases 2011 Annual Report; ABLES and FACE 2011 data included - September 2012 [www.idph.state.ia.us/Cade/Default.aspx](http://www.idph.state.ia.us/Cade/Default.aspx)
  - 2012 Annual Report data submitted May, 2013, pending department release

### Presentations

- IDPH OHSSP Overview – Iowa State University Veterinary Students, 8/16/12
- ABLES Lead Exposure in Iowa – TriState Occupational Health Clinic, Dubuque, 10/08/12
- IDPH OHSSP 2012 Farm Progress Show – State Traffic Records Coordinating Committee quarterly meeting, 10/10/12
- IDPH OHSSP Partnerships - IDPH department internal training event 11/6/12
- Work-related Grain Fatalities-What's Happening Here - Midwest Regional Agricultural Safety & Health Conference, 11/15/12
- Iowa OHSSP Partnering with Public Health Campaigns – NIOSH State-based surveillance partners meeting, Tampa FL, 12/6/12
- OHSSP Stakeholder's Webinar, presentations on program, ABLES, OHI, partnerships, activities - 3/4/13
- Poster: Adult Lead Poisoning Cluster from Ayurvedic Product Usage in Iowa, 2011 –Iowa Governor's Conference for Public Health, scheduled for April 9-10, 2013
- Lead Bureau, ABLES, OHSSP New Sanitarians Training – April 15, 2013
- Reducing Lead Exposure in Battery Manufacturing Facilities –2013 Council for State and Territorial Epidemiologists (CSTE) annual meeting, jointly with IA, MO, OH, June 2013

### Displays

- 2012 Farm Progress Show, multiple areas (pesticides, ATV, hearing, worker fatalities, roadway safety)- Boone, IA August 28-30, 2012
- Keeping Kids Safe Seminar- ATV Safety, Youth Worker Safety, Des Moines, IA September 11, 2102
- Iowa Governor's Safety Conference, Altoona, IA November 1, 2012
- Midwest Regional Agricultural Safety & Health Conference, Cedar Rapids, IA November 14-15, 2012

## **PESTICIDE POISONING SURVEILLANCE- SENTINEL EVENT NOTIFICATION SYSTEM FOR OCCUPATIONAL RISKS (SENSOR)**

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### **POTENTIAL OUTCOMES**

- The OHSSP pesticide SENSOR program processed 2,964 exposure reports from the Iowa Statewide Poison Control Center for 2012. These reports are currently being analyzed for inclusion in reporting to the NIOSH SENSOR database and other reports.
- OHSSP project staff enhanced program capacity to perform activities meeting the established surveillance protocols for pesticide poisoning of NIOSH SENSOR by working with the Iowa Statewide Poison Control Center's Toxicall database manufacturer to develop a SQL database mirroring the functions of the original database. The SQL database also allows full query and analytical functions. The original Toxicall database did not have an export function that allowed easy analysis of data. This upgrade will allow the project epidemiologist to match cases from multiple reporting sources (such as emergency room or hospital discharge datasets) and generate a more usable dataset for analysis and reports. It also increases the efficiency of the project by saving time on data entry and review.
- Pesticide poisoning surveillance staff participated in the development of the Iowa Environmental Public Health Tracking program and the Iowa Public Health Tracking project to provide additional platforms for the dissemination of Iowa pesticide data to the public.
- Iowa Pesticide SENSOR provided a display and targeted educational information at the Iowa Governor's Conference on Public Health with over 550 local public health participants.
- Iowa Pesticide SENSOR provided targeted educational information for farmers and their families and a display highlighting safe pesticide usage at the 2012 Iowa Farm Progress Show which attracted over 100,000 participants. The display included materials for the Agricultural Health Study, which has been ongoing since 1993 and has over 89,000 participants from North Carolina and Iowa.

### **INTERMEDIATE OUTCOMES**

- The Iowa Pesticides Program collaborated with the Iowa Department of Agriculture and Land Stewardship (IDALS) to consult and transfer investigative materials between the organizations resulting in more accurate and timely investigation of exposures. IDALS provides regulatory oversight for pesticide use and applicator licensure in Iowa.
- The OHSSP program communicated regularly with the Iowa State Extension Service providing findings from Iowa OHSSP surveillance, new or innovative information on pesticides, and opportunities to participate in national forums. IDALS contracts with ISU Extension to develop and provide training for Iowa Certified Pesticide Applicators.

- The OHSSP program communicated findings from Iowa OHSSP surveillance regularly with the AgriSafe Network, the National Educational Center for Agricultural Health (NECAS), and the University of Iowa Great Plains Center for Agricultural Health (GPCAH) and Iowa's Center for Agricultural Safety and Health (ICASH), and provided new or innovative information on pesticides and opportunities to participate in national forums.

## **MAJOR OUTPUTS/PRODUCTS**

### **Publications**

- Co-authored article in the American Journal of Industrial Medicine associated with pesticides. Characteristics and Magnitude of Acute Pesticide-related Illnesses Associated with Pyrethrins and Pyrethroids – 11 States, 2000-2008. June 20, 2013.

### **Display Materials**

- Agricultural Health Study Banner and Information Cards – developed and printed through partnership with the Agricultural Health Study (<http://aghealth.nih.gov/>) and the National Institute of Environmental Health Services for use at the 2012 Farm Progress Show, August 28-30, 2012.

## FATALITY ASSESSMENT & CONTROL EVALUATION (FACE)

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### POTENTIAL OUTCOMES

- Increased collaboration between emergency responders and Iowa FACE Program regarding identification and sharing of case information following Iowa FACE presentation to Iowa Fire Chiefs Annual Meeting.
- Heightened awareness of the dangers of distracted driving which result in workplace policies regarding employee cell phone use (following publication of the Iowa FACE report 2012 IA 041).

### INTERMEDIATE OUTCOMES

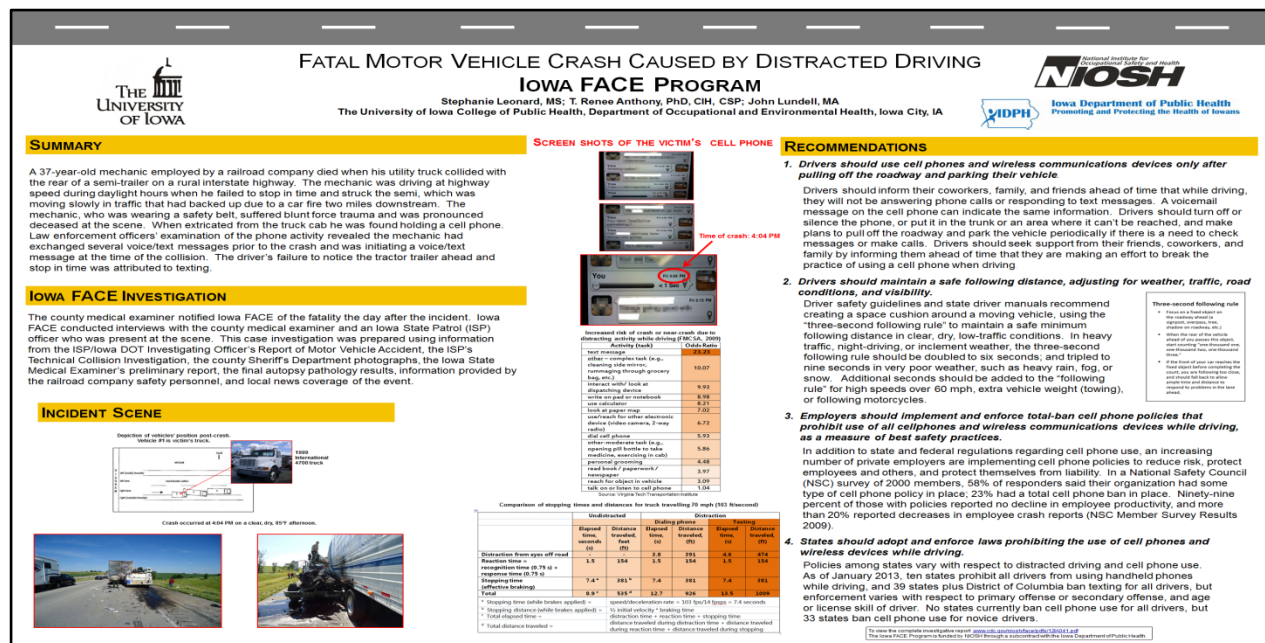
- Iowa FACE investigation findings and recommendations are being incorporated into the UI College of Public Health's Great Plains Center for Agricultural Health "Resources For Workers and Employers" website ([www.cph.uiowa.edu/gpcah/resources/tractor-overturns.html](http://www.cph.uiowa.edu/gpcah/resources/tractor-overturns.html)).
- An Iowa State University professor used a FACE project Hazard Alert (Tractor Rollover) as the basis for developing a research project for his industrial design class. The class developed a prototype that will sound an alarm if a tractor is in danger of rollover, and in the event of a rollover will alert 911 and designated contacts while providing GPS coordinates to help locate the victim. Further development of the product (testing, licensing, and production) is currently ongoing with partners of Iowa's Center for Agriculture Safety and Health (ICASH Board of Director participation by OHSSP staff).

### MAJOR OUTPUTS/PRODUCTS

#### Fatality surveillance and investigations

- Sixty-two fatalities meeting FACE criteria were identified in the period from July 2012-June 2013. Twenty-one case investigation reports were finalized and published (see Table 1; full reports are available at [www.public-health.uiowa.edu/face/Reports/IDnumber.html](http://www.public-health.uiowa.edu/face/Reports/IDnumber.html)).
- Two case investigation reports were featured in National Safety Council's **Safety+Health Magazine** and website: *2010 IA 054 Construction laborer fell from ladder* was featured in March 2013; *2012 IA 041 Diesel mechanic killed in motor vehicle crash caused by distracted driving* was featured in May 2013 at the conclusion of NSC's Distracted Driving Awareness Month.
- A flyer featuring the distracted driver case was developed focusing on hazards of distracted driving and distributed by OHSSP during National Public Health Week and April's Distracted Driving Awareness Month.
- Six case investigations involving workers employed in agriculture, transportation, public administration, and wholesale and retail trade sectors were initiated July 2012-June 2013. New case investigations utilized existing collaborative relationships with the Iowa Department of Public Safety and Iowa WorkForce Development (Department of Labor).

- The distracted driving case was the focus of a poster presentation at the 2013 NIOSH FACE Program Annual Meeting held in Morgantown, WV.



## PRESS RELEASES/PUBLICATIONS

- Iowa FACE developed and distributed a news release and hazard alert regarding the hazards of starting tractors from the ground following two Iowa fatalities that occurred in October 2012 as a result of this practice (IA Alert 102012, [www.public-health.uiowa.edu/face/alerts/1012Alert.pdf](http://www.public-health.uiowa.edu/face/alerts/1012Alert.pdf)). This release generated an article that was published November 1 in **Iowa Farmer Today**, a weekly agricultural newspaper with circulation of 65K recipients in Iowa and 18K recipients in neighboring states. The article was also distributed to 300 publisher members of the Iowa Newspaper Association and featured in several weekly publications and/or their Facebook pages. The majority of members are medium and small publishers serving rural constituents (example available at: [www.ncnewspress.com/article/20121031/NEWS/121039986](http://www.ncnewspress.com/article/20121031/NEWS/121039986)).
- A description of the FACE Program's traumatic work-related fatalities surveillance activities was published in Iowa's Surveillance of Notifiable and Other Diseases Annual Report 2011, (IDPH, July 2012) <http://www.idph.state.ia.us/Cade/Default.aspx>.
- The IDPH Fact Sheet – "Farm Safety is Important" containing Iowa work-related traumatic fatality information (FACE Program data) was distributed at the Iowa Farm Progress Show, Boone, IA, Aug 28-30, 2012; and in the IDPH National Farm Safety and Health Week media packet, September 16, 2012.

## WORKSHOPS AND CONFERENCES

- Face-related presentations were made at a number of workshops and conferences across the country. A display poster at the Iowa Governor's Safety Conference featured Iowa FACE case investigation report 2012 IA 009 regarding the hazards of methylene-



chloride based products to strip and refinish bathtubs and other surfaces. Presentations on the dangers of ATV use and in grain storage operations were made at several conferences including the Midwest Rural Agricultural Safety and Health (MRASH) regional conference held in Amana (November) and the International Society for Agricultural Safety and Health (ISASH) held in Sandusky, Ohio (June).

- Among the other FACE-related presentations held during the past year were:
  - *“Improving Occupational Safety: The Role of the Iowa Fire Service”* - 61st Annual Iowa Fire Chief's Association Meeting, Coralville, IA, November 17, 2012.
  - *“The Iowa FACE Program”* - UI Department of Occupational and Environmental Health graduate class: Introduction to Injury and Violence Prevention (175.175), Iowa City, IA November 29, 2012.
  - *“The Iowa FACE Program and Methods for Investigation of Workplace Fatalities”* - UI Department of Occupational and Environmental Health graduate class Agricultural Safety: Theories and Practice (175:196) March 2013.

**Table 1: Case investigation final reports, Jun 12-Jul 13**

2012 IA 041	Diesel mechanic killed in motor vehicle crash caused by distracted driving <sup>a</sup>
2012 IA 009	Bathtub refinishing technician died from inhalation of paint stripper vapors <sup>b</sup>
2012 IA 001	Farmer engulfed in soybeans while operating grain vacuum in steel bin
2011 IA 075	Truck driver died of thermal injuries after his tractor-trailer crashed into concrete median
2011 IA 043	Farmer dies from injuries after being attacked by bull
2011 IA 035	Convenience store cook died from smoke inhalation
2011 IA 013	Law enforcement agent killed in line of duty
2010 IA 054	Construction laborer fell from ladder <sup>c</sup>
2010 IA 017	Fatal burn injury while bulldozing and burning brush
2010 IA 005	Special needs sanitation route helper caught in tailgate of waste collection truck
2009 IA 037	Farmer caught in compression rollers of hay baler
2008 IA 081	Farmer crushed by corn head when disengaging it from combine
2007 IA 081	Farmer killed when large round bale tumbled from forks in loader bucket
2005 IA 086	Truck driver entangled in drive train while freeing seized brakes
2005 IA 020	Farmer engulfed and suffocated in soybeans during unloading of steel grain bin
2005 IA 019	Exit pit worker entangled in horizontal directional drill back reamer
2005 IA 015	84-year-old farmer died when tractor overturned while feeding cattle on hillside
2005 IA 013	Tractor moving large round bale on loader forks overturned onto farmer
2004 IA 058	Farmer asphyxiated when entangled in drives of box-type manure spreader
2004 IA 051	Driver pinned under haul truck that went off quarry road and tipped over
2003 IA 022	Tractor with cable hitched high to tow brush overturned rearward on farmer

<sup>a</sup>: featured in NSC Safety+Health Magazine, May 2013

<sup>b</sup>: cited in a collaborative NIOSH/OSHA hazard alert on hazards of methylene chloride surface refinishing products

<sup>c</sup>: featured in NSC Safety+Health Magazine, March 2013